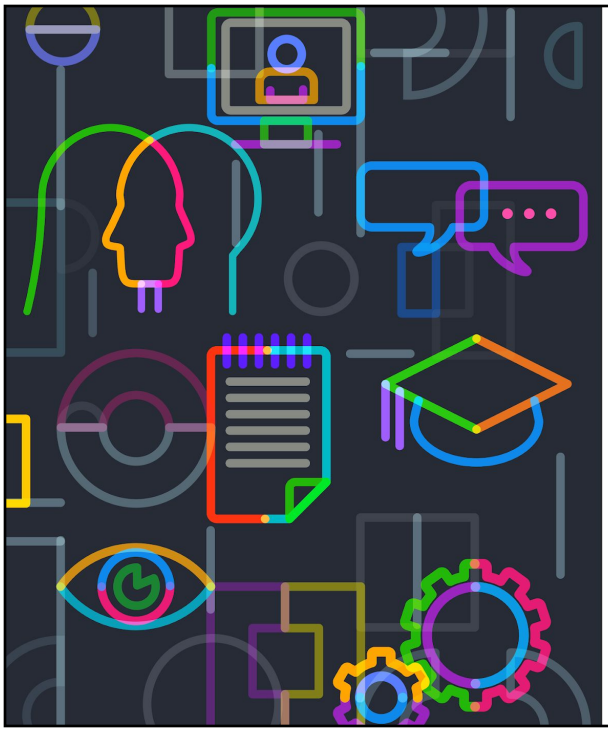
AGENTS OF CHANGE FOR EQUITY

# Kaleidoscope Thinking: Shifting the Way we Look at and Use Data

Dr. Shirley Vargas

## Objectives

- Develop an understanding of kaleidoscope thinking
- Unearth the multiple data sources at our fingertips
- Discuss a root cause analysis and its potential uses
- Discuss ways to bring others along on shifting the kaleidoscope
- Answer any questions

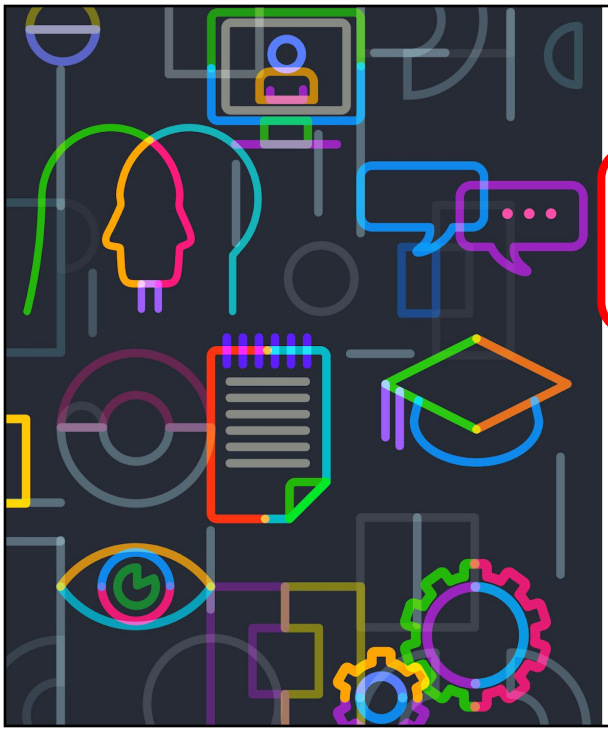


**Mission:**
To lead and support the preparation of all Nebraskans for learning, earning, and living.

**Goal:**
Ensure all Nebraskans, regardless of background or circumstances, have equitable access to opportunities for success.

**Goal:**
Increase the number of Nebraskans who are ready for success in postsecondary education, career, and civic life.

**Goal:**
Ensure the education system, including the Nebraska Department of Education, are taking charge of their roles and responsibilities to provide leadership and enhance school support systems in the state.



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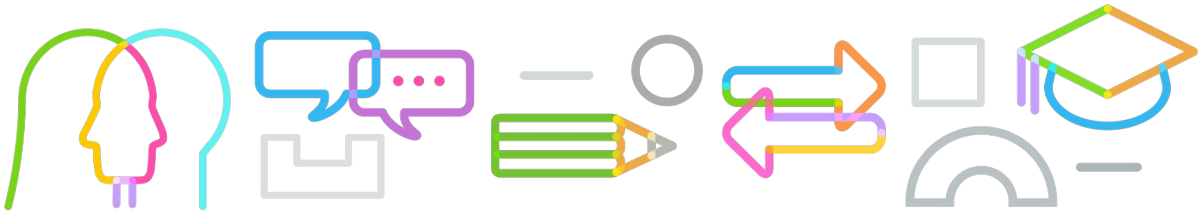
# Educational Equity

Educational equity means all students have meaningful access to the educational resources they need at the right moment, at the right level, and with the right intensity to not only reach high expectations for learning, but also to discover and explore their passions and make meaningful connections within the context of their postsecondary interests, careers, and civic lives.



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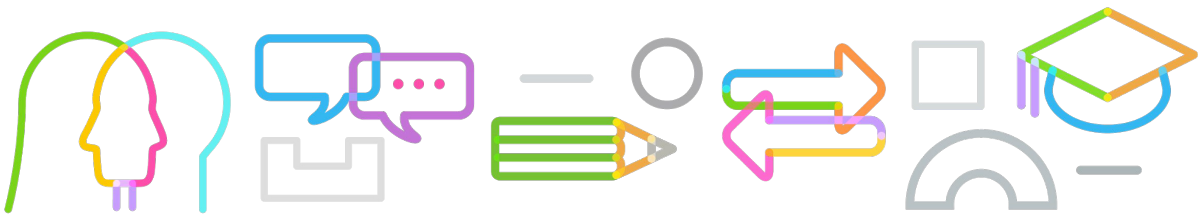


# School Improvement Core Beliefs

We believe:

- ...in the value of work already taking place in schools.
- ...all schools can improve.
- ...it's not our students' fault.
- ...school improvement is fundamentally about equity.

## Kaleidoscope Thinking

Harvard Business School Professor Rosabeth Moss Kanter, refers to kaleidoscope thinking as, "a way of **constructing new patterns from the fragments of data available**, patterns that no one else has yet imagined, because **they challenge conventional assumptions** about how pieces of the organization, the marketplace, or the community fit together."

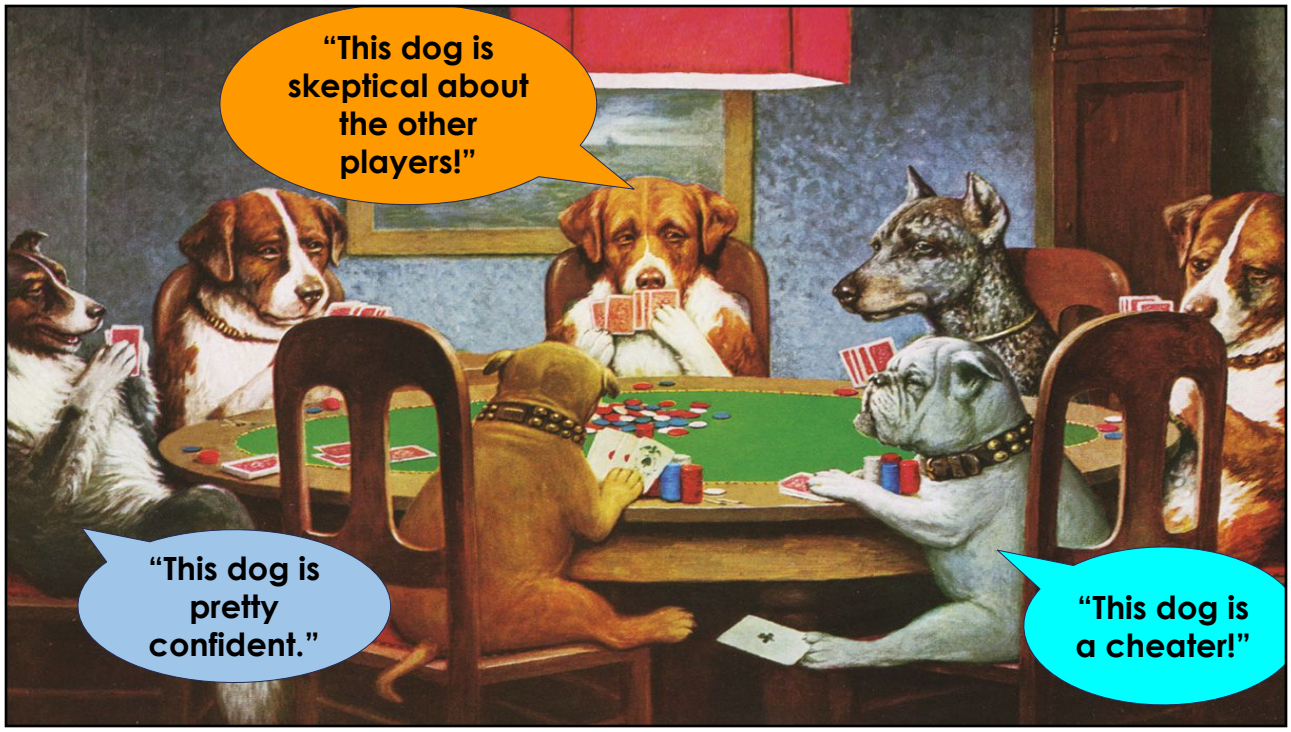
Kanter, R. (2005). *Leadership for Change: Enduring Skills for Change Masters.* Cambridge, MA. Harvard Business School. Case # 9-304-062.

# Kaleidoscope Thinking

***Looking at data differently***

What are the mindsets and skills necessary to look at data differently?

What causes us to view data the way we do?

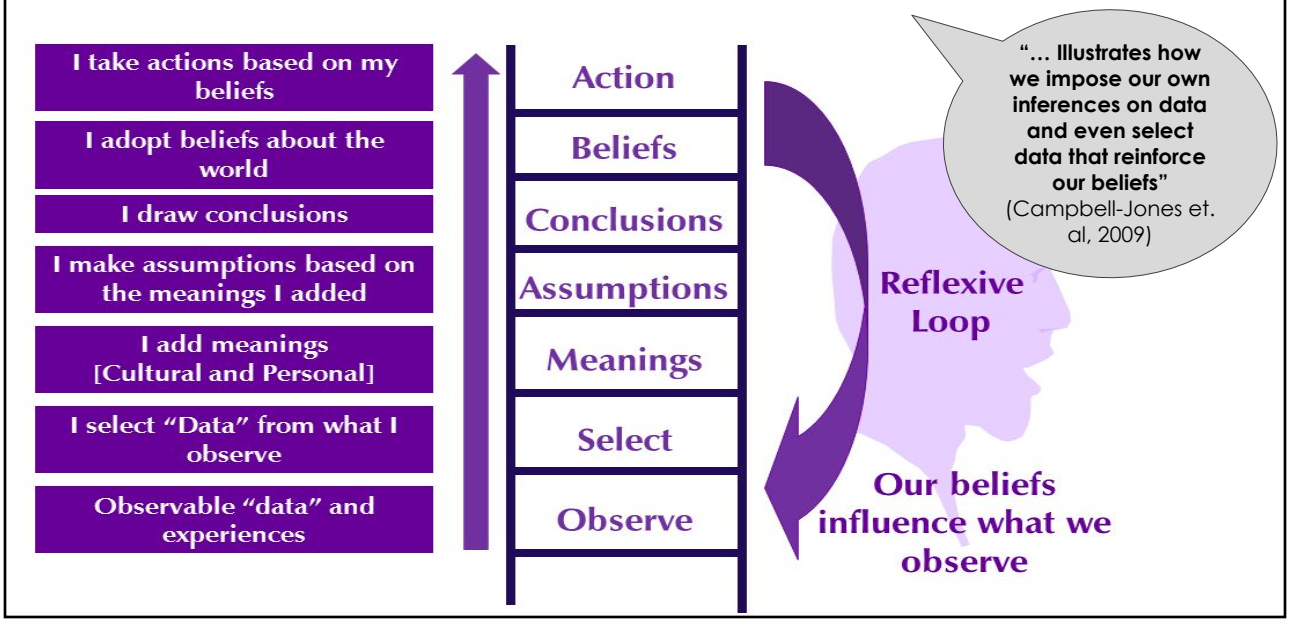



# The Ladder of Inference

| | | |
|---|---|---|
| I take actions based on my beliefs | Action | |
| I adopt beliefs about the world | Beliefs | |
| I draw conclusions | Conclusions | "These dogs are cheaters. I can't trust dogs, so I probably won't have one as a pet." |
| I make assumptions based on the meanings I added | Assumptions | |
| I add meanings [Cultural and Personal] | Meanings | "The last time I played poker, my friends used non-verbal cues to cheat." |
| I select "Data" from what I observe | Select | |
| Observable "data" and experiences | Observe | "I see it's a poker game and one dog is holding a card in his paw" |

Going "up the ladder"

# The Ladder of Inference

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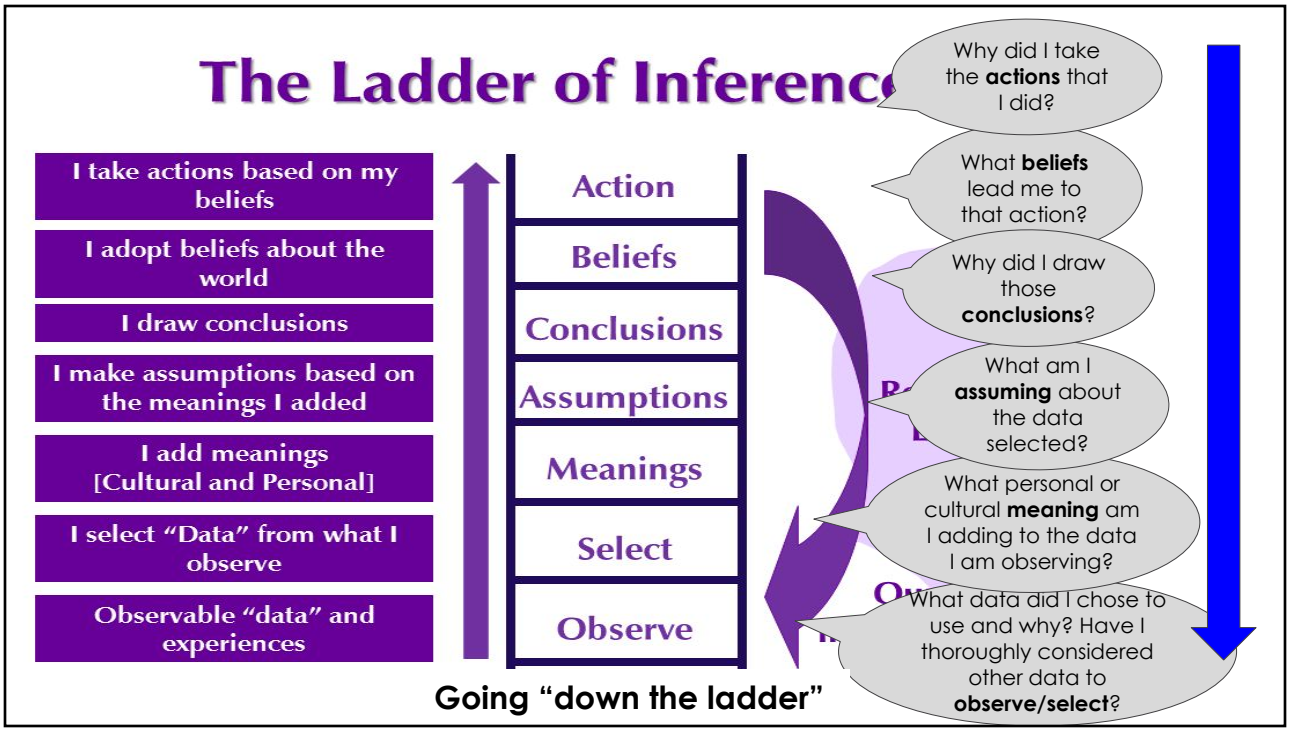



**Going "down the ladder"**

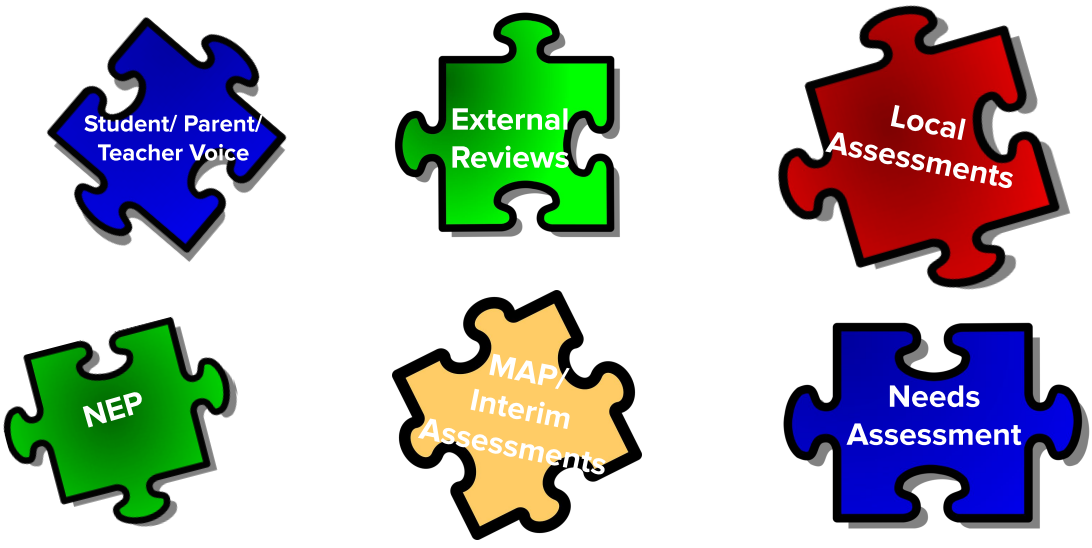

# Kaleidoscope Thinking

***Understand what the data is communicating***

What do we know about the current data we collect?

How could we optimize the usage of our current data?

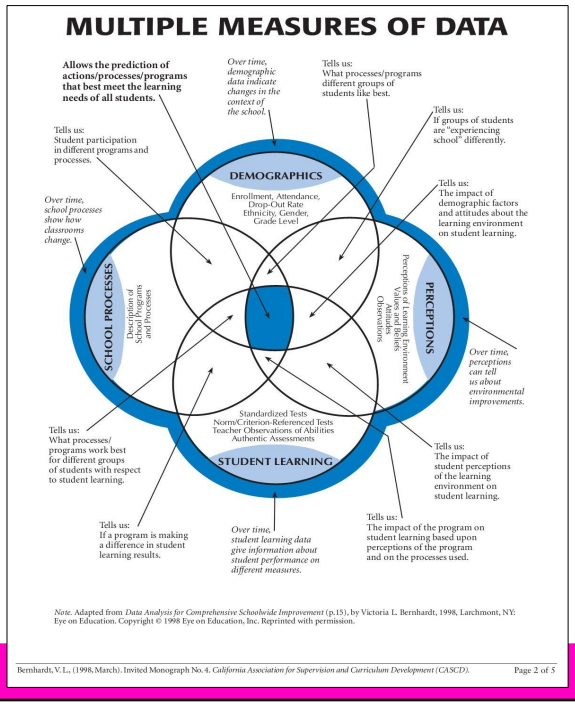
# Various Sources of Data




**Others?**

## Taking Stock of our Varied Data Sources

- Demographics
- Perceptions
- School Process
- Student Learning



School teams collaborate OR individually reflect

# Data Inventory (pg. 1)

| Data Source | Dates of collection | Current data use | More effective use |
|---|---|---|---|
| MAP Growth | Fall, winter, spring | Pulse check | Student grouping and interventions |
| | | | |
| | | | |
| | | | |
| | | | |

# Debrief

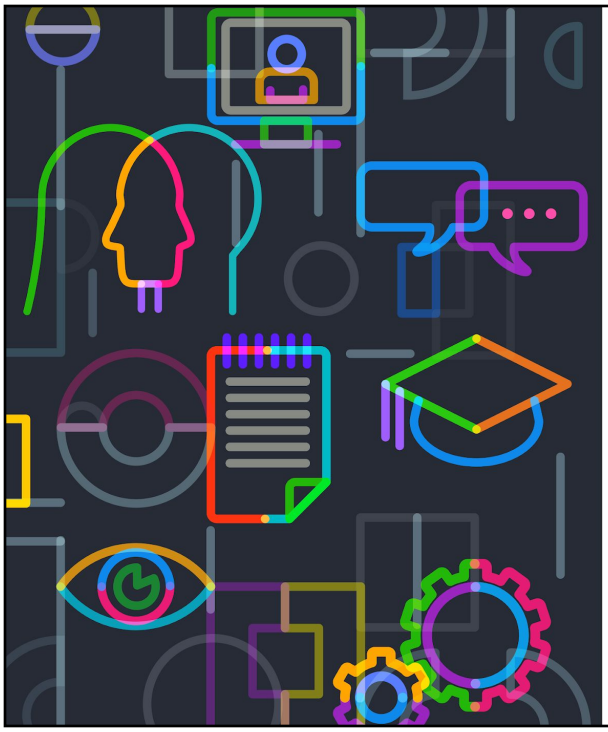
- What did you notice/wonder about the various sources of data?
- What gaps or redundancies do you see in the data you collect?
- What evidence did you use to support your findings?
- What did the process reveal?

# Kaleidoscope Thinking

***Understand what is contributing to each piece of data***

How can data representation perpetuate a deficit-perspective about what students can achieve?

What tools can we use to help us understand what is causing the data we see?



# Why Disaggregation Matters

Disaggregated data can assist in:

- ...**evaluating** how specific groups of students are performing.
- ...considering educational perspectives and teaching methods that **address the differences among students**.
- ...**revealing patterns** that can be concealed by aggregate data.
- ...**identifying needs** so that allocation of human and financial resources are done more accurately and equitably.
- ...**acknowledging the racial/ethnic heritage** of students and families.
- ...**monitoring equity** in educational resources and outcomes.

Source: https://nces.ed.gov/forum/pdf/Disaggregated_Data_PPT.pdf

| Student Group | 2018 4-year Graduation Rate |
|---|---|
| All Students | 88.66 |

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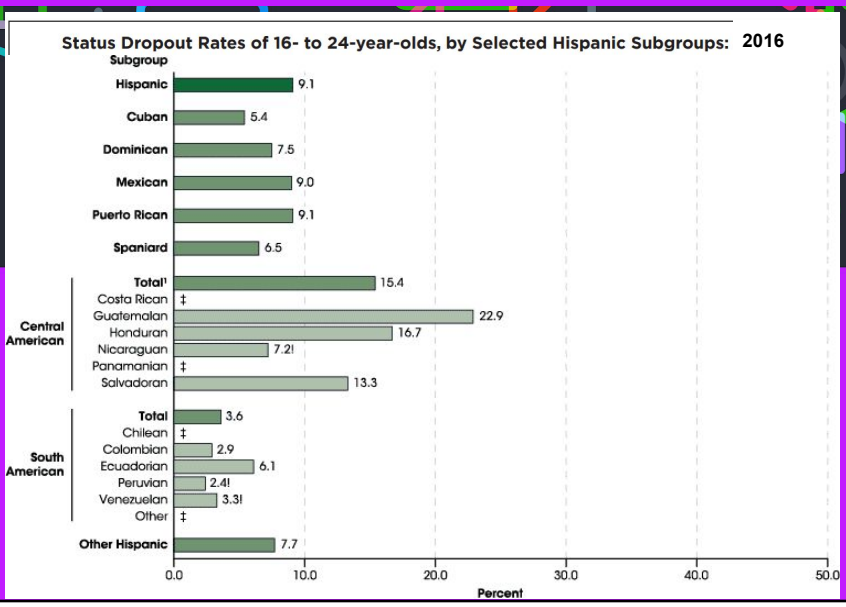
|---|---|
| All Students | 88.66 |
| Native Hawaiian/Pacific Islander | 95.24 |
| White | 92.45 |
| 2 or More Races | 85.14 |
| Asian | 81.86 |
| Economically Disadvantaged | 81.22 |
| Hispanic/Latinx | 80.97 |
| Black/African American | 78.02 |
| Students with Disabilities | 69.27 |
| Native American | 69.27 |
| English Learners | 48.76 |

# Student Groups are Not Homogeneous




*How data is presented can create limiting narratives around achievement, especially for students who have been at a disadvantage. Data doesn't come to life on its own so people who construct data (and the narratives surrounding it) must be aware of the potentially harmful biases they may be imposing on students.*

**Joshua Ddamulira, Data Quality Campaign**

| **Problem:** In our middle school (6-8th grade), a large percentage of our students have consistently struggled to meet proficiency benchmarks in math based on multiple sources of data. | | |
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| **Symptom:** 95% of all students fall below proficiency on NSCAS (on-track and CCR benchmark). | **Symptom:** While 95% of students are below proficiency, even greater gaps exist between students with disabilities and students without disabilities. | **Symptom:** During fall testing, 70% of all students show a decrease in RIT scores as shown on MAP math interim assessment. |


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| **Why?** All students do not have the opportunity to engage in rigorous math learning experiences. | | |
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| **Why?** Our math teachers are not teaching to the same rigor that the standards require. | | |
| **Why?** Our teachers do not yet have the requisite knowledge and skill to adequately and consistently teach to the standards. | | |
| **Why?** Our school has not had a consistent focus on what is effective and rigorous math instruction. | | |
| **Why?** We have not invested in the training and support our teachers need to align math content standards, instructional materials, and differentiate instruction. | | |

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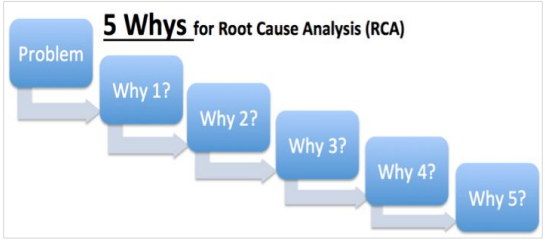
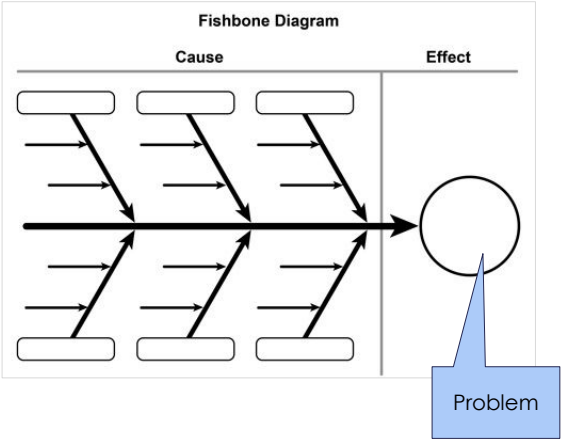
- **Skipping whys can lead to potential misdiagnosis**
- **What data is informing each why?**
- **Is the root cause within your control?**

# Root Cause Analysis (pg. 2-3)



# Kaleidoscope Thinking

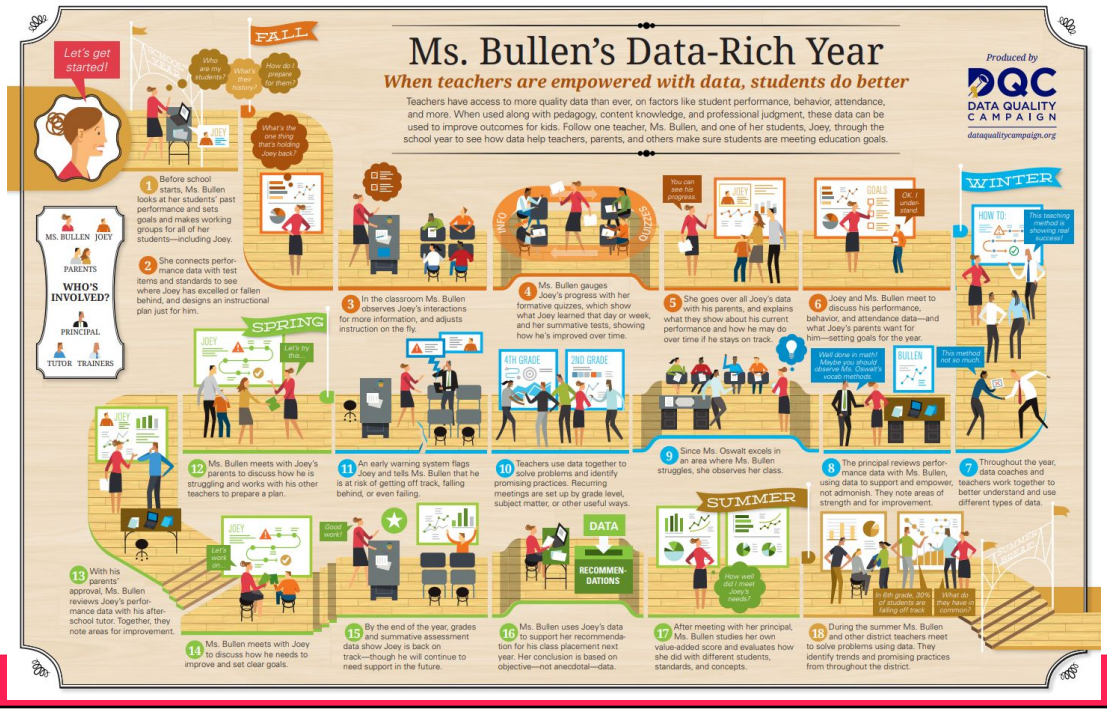
***Engage others in shifting the kaleidoscope for endless possibilities***

How can we better use our data to discover more possibilities?

How do we build the collective efficacy of our school community to shift the kaleidoscope?

# Bringing our Data Together


Source: Data Quality Campaign




# Strategies for Better Using Data

Teachers:

- **Collaborate** with one another
  - Sharing best practices
  - Sharing how students are doing across subjects
- **Engage** school leaders around challenges and needs
- **Empower** students in their data

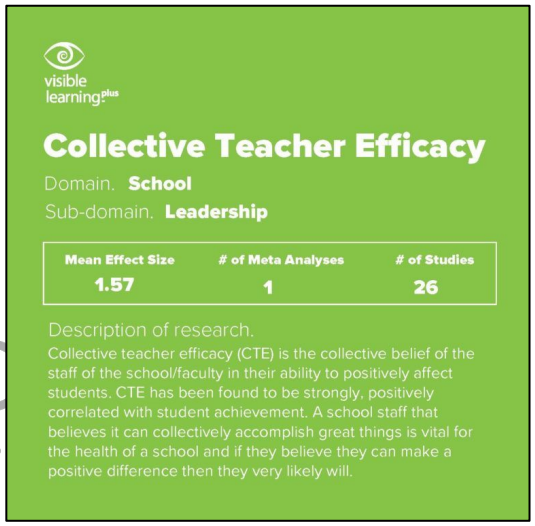
Administrators

- Use data-driven instructional models
- Ensure teachers **have access to data** every day and insist upon data-driven instruction
- Provide **high-quality data tools**
- Support teachers by **investing** in staff, training, dedicated time, and PD for data use
- **Engage teachers** in process of identify products, tools, and strategies
- **Empower parents** and the community in data use

# Collective Teacher Efficacy

"Teachers working together to have appropriately high challenging expectations of what a year's growth for a year's input looks like - fed with the evidence of impact - is what sustains it."

-Professor John Hattie




## *The Power of Protocols* (pg. 4-5)

**Peeling the Onion**

Purpose

- Acknowledge and appreciate the complexity of a problem
- Use to gain clarity about a problem instead of attempting to solve it first

**Equity Protocol**

Purpose

- Focuses on student work
- Discuss ways that materials, tasks, feedback, etc., promote equity for each student

**What are some ways in which you promote collaborative dialogue/inquiry for problem clarity/solving? For identifying ways to promote and achieve equity? How do you support the collective efficacy of your staff?**

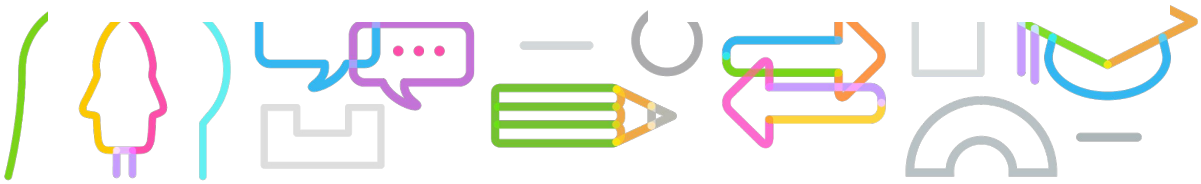
# Kaleidoscope Thinking

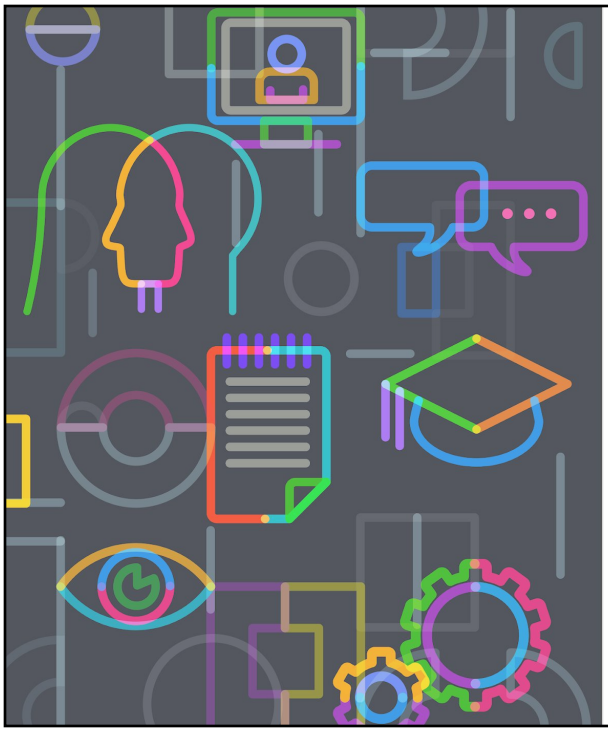
What it is...

- Looking at data differently
- Deeply understanding what the data is communicating
- Identifying potential causes for the data
- Knowing there are endless possibilities

Tools to support this thinking...

- Ladder of Inference
- Data Inventory
- Data Disaggregation
- Root Cause Analysis
  - 5 whys
  - Fishbone Diagram
- Protocols





# Additional Resources

- Protocols:
  - *National School Reform Faculty* https://nsrfharmony.org/protocols/
  - *School Reform Initiative* https://www.schoolreforminitiative.org/protocols/
- Data tools/briefs/resources:
  - *Data Quality Campaign* https://dataqualitycampaign.org/resources/
- Root Cause Analysis
  - Toyota Welding Robot 5-why → 17-why https://www.thinkreliability.com/toyota-welding-robot-5-why/
  - Magnolia Consulting, Fishbone Diagram https://magnoliaconsulting.org/tools/

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